

Student Learning and Support on a Virtual Campus



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NEW TECHNOLOGY: STUDENT LEARNING AND SUPPORT

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By

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1. Introduction

As you and I consider what it is we must do to support learners of the virtual universities in the future, it may not be out of place to review our current position, in terms of educational opportunities and needs, from where we are planning to operate the proposed virtual classrooms.

To begin with: there are many things about OUR century that we can be proud of. Colonialism is by and large gone and most countries are now independent; more and more people want to participate in making their communities work and the voice of and for human freedom is finding a hearing across the world; there are signs of perhaps global peace and security; human development generally seems to be on a fast course with the developing countries on a much faster pace than, say, that of industrialised countries in the last century, and the ingenuity of humans has led to many technological advancements in space, medicine, agriculture, information and communication. While we can and should commend ourselves on this progress, there is still a long list of deprivations, for example, the disparity between the rich and poor nations in terms of food, health care and social security is still large and increasing; there are now more conflicts within nations than between nations, and the social and political fabrics of many countries are beginning to disintegrate; the environment is largely endangered and our biodiversity at risk of massive erosion.

2. The Educational Demand

Nowhere is this disparity more glaring than in the field of education. Just consider these:

(i) Participation rate at pre-tertiary levels of schooling in the OECD

- countries is between 88 and 93% and at tertiary levels it is between 30 and 50%.

(ii) In non-OECD countries of East Asia and the Pacific Islands,

- participation rate at primary school level is close to 90%, though in East Asia some 100 million young boys and girls are still out of school. Participation in tertiary education is below 15%.

(iii) In South Asia, some 380 million people are still illiterate; while

- participation rates in primary school education have increased dramatically to about 70%, at the tertiary level participation is around 5% and less for the whole region.

(iv) In Latin America and the Caribbean, about 31 million or roughly 86% of young children are able to go to primary schools, but less than half of grade 1 entrants reach grade 5; at the secondary level some 20 million boys and girls and at the tertiary level some 27 million men and women are out of school.

(v) In the Arab States, some 46 million {from 80% (primary) to 55% (secondary)} young people are in school, however, 80 million people are illiterate and a total of 23 million children are either out of primary or secondary schooling. In tertiary education, participation rate is very low.

(vi) In Sub-Saharan Africa, some 80 million young people are out of primary and secondary schools which is about 45-55% of the age cohort. Participation in tertiary education is between 1,200 (South Africa) and 16 (Mozambique) per 100,000 of the population.

It is in this environment of tremendous disparities at all levels of the education sector that we need to examine our roles as educational providers both within and outside of our countries. In as far as the higher education sector is concerned, two factors must receive serious attention:

. The first is the fact that despite high numbers of illiterate and out of school children and youths, the number of individuals coming out of school and aspiring to undertake post-secondary education continues to grow - there are more than one billion youths attending school today (less than 300 million 50 years ago).

. Second, the place of work continues to change rapidly not only in terms of the sectors but also in terms of the nature of work - agriculture and industrial work no longer constitute major sectors of employment, instead, more than one-fourth of the labour force in developing countries and more than two-thirds in the OECD countries now work in the service, communication, computing and information sectors. These sectors demand a constant renewal of knowledge and skills.

If we accept the premise that education, more than any other factor, can make the real difference between wealth and poverty, health and misery, conservation and destruction, national unity and division, then the levelling of educational opportunities must be a priority in the next decade. All this means an unprecedented demand for and growth in the higher education sector not only to serve the needs of those coming out of school between the age groups of 18 and 24 years, but also those who will continue to return to study to keep up with changes in the work place. The World Bank estimates a growth rate of 8% in the low income countries against a 4.5% rate for the higher income groups. Various other estimates seem to indicate that by the first quarter of the next century, there may be as many as 150 million individuals seeking post-secondary education in colleges, polytechnics and universities. In 1994, less than 50 million were served by between 16 and 20,000 post-secondary institutions at an annual cost of some US\$1,200 billion. Most of the new demand will come from the present low income countries as well as from other non-traditional sources of supply (the chronically unemployed, people temporarily out of employment, women, girls, youths out of school, refugees and the disabled). The regions where the demand will be most dramatic will be the same ones where the fiscal, physical and human infrastructure needed to meet the demand will be the least developed. Alternate ways of bringing education to these marginalised communities have to be found. It is in this context that we should see a role for virtual classrooms and universities not so much as more provision for those who already have access to these "utilities" but to the millions who do not and who must be brought within our footprints.

3. What Maketh A Virtual Campus

"Those who have and those who do not" do not fall neatly into geographical locations. While geography contributes a little to this disparity, the disparity in the distribution of wealth, an appreciation of the returns from investment in learning, access to and information about knowledge are as great within communities as they are between nations. Assuming that the new global agenda is about removing disparities within nations as much as between nations, then those of us who speak for and assist in the development of the virtual campuses have the added responsibility of assuring that there is adequate infrastructure and human skills in our communities to conduct the teaching and learning. Four aspects of a virtual campus that I would consider important for concern would include:

(i) Infrastructure for learners

In their book, the Virtual University, John Tiffin and Lalita Rajasingham identified the following as essential infrastructure:

- . organised learning needs complex communication systems that will assist learners to become proficient "problem solvers". Such systems are concerned with transmissions, storage and processing of information which have the capacity to intermesh the four factors of learning, teaching, knowledge and problem;
- . to accommodate a broad spectrum of instruction, education needs a transmission system that is two way, synchronous and asynchronous and have a bandwidth capable of high fidelity information, stimulating most human sensory abilities; and
- . to be capable of a broad spectrum of instruction, education needs a number of sub-systems and here a special mention must be made of instructional design capabilities.

(ii) Skills that learners need to bring

Like any other educational transaction, virtual learning systems are useful only as long as their clients have the capacity and skills to use them. At least, the following minimum skills must be there:

- . students are mature learners and have a capacity for self directed learning;
- . students are proficient in the use of technology;
- . students know about and have a capacity to successfully access and manage information; and
- . students have the ability to analyse and identify their personal educational needs throughout their lives.

(iii) Faculty and institutional commitment and skills

The tradition of our academic culture is such that a major shift in the teaching and learning paradigm where learner centredness, rather than faculty or institution driven curriculum, becomes the overriding feature of the relationship will require both skill and commitment from institutions and their staff to:

- . recognise and respond to the learning needs of their clients;
- . define clearly the goals and objectives of the learning experience;
- . establish clear pathways of learning and progression within the framework;
- . identify alternate routes to achieving learning objectives;
- . development of self-instructional materials; and

. develop user friendly administrative, delivery and maintenance systems.

(iv) A more imaginative and client responsive curriculum

Cyberspace does not recognise territories and boundaries and those of us who wish to educate via cyberspace will do well by recognising that self directed learners will and should be given the latitude to access their learning from a multitude of sources. The acceptance of such student autonomy behoves us to design curriculum that will enrich and enable learners to exercise their autonomy. Such curriculum will have certain core universal objectives regardless of the location where the learning is taking place. In the recently published Delors Report, the UNESCO Commissioners called for four pillars of education to form the basic framework of education. These being:

. Learning to know, by having a broad overview of things and the skills to work in-depth on selected fields; learning to learn and thereby benefit from opportunities to learn throughout life;

. Learning to do, by acquiring vocational skills and the competencies to work in different situations and to work in teams;

. Learning to live together, and appreciating other cultures and people, respecting pluralism, peace and managing conflicts; and

. Learning to be, so as to better develop one's own personality, acting with autonomy, judgement and personal responsibility.

The call for curricula reform is not a new one. In early 1990, the Royal Society of the Arts, in arguing a case for wider participation in better higher education, made a similar plea for courses and programmes to be:

. Rigorous, attractive and enabling, so as to attract and retain student interest in learning, rigorous in its demands of intellectual and skills challenges and enabling learners to know and to do;

. Provide appropriate balance of subject skills and knowledge, general conceptual skills and personnel transferable skills, to work together, to lead and to respect others and their views; and

. Give added value and fitness for purpose to each student or learning to be; and more recently, the OECD, through its reports on the educational challenges confronting its member states, seemed also to indicate the need for curricula reform which will result in learners acquiring the skills of:

. Communication, especially for working in a multicultural environment given the mobility of today's population, for learners to appreciate the cultural differences of people outside their own communities and countries;

- . Problem solving, which will require the ability to frame problems in the first place and then to apply information technologies to solve them;
- . Working together in teams made up of people with different backgrounds, culture and skills; and
- . Self learning, to be a lifelong learner, not only the skills of learning but also skills to assess what knowledge and skills one need to acquire to be competitive in and relevant to one's living environment.

Technology does not teach; it helps in the creation, production and delivery of teaching. It enables the transformation of the relationship between teachers and learners. Multimedia and hypermedia which brings together under one umbrella, the essence of print, audio and video signals, computer assisted instruction, computer conferencing and computer assisted group learning, will always need teachers, faculties, institutions and the knowledge, skills, support and encouragement they can give their learners for them to be successful. In the final part of the presentation, let me share with you what I think will be the minimum essentials that need to be considered.

4. Helping To Succeed In Learning

I will touch on three core elements of learner support which are comparable to learners in more traditional settings and they are:

(i) Administrative Support

This should include all information regarding admission requirements,

costs, kinds of personal technological needs, assistance with course selection and study progressions, policies, procedures, academic calendars and protocols for completion of courses and programmes. On-line assistance with registration, student records and financial support are also helpful.

(ii) Technology Support

Technology becomes the crucial aid to access learning, communication and interaction with knowledge providers. Students may require technology skill training but they certainly will need technical support, help in the acquisition of hardware and software and their maintenance and upgrading (some may even need an easier or free access to these technologies).

(iii) Learning Support

Apart from all those facilities needed for successful learning such as access to laboratories, libraries, learning centres, and tutors, a caring and sensitive learning culture

must include those elements that make up for effective learning which Bill Renwick succinctly summarised from the thesis by Chickering and Gamson. These include:

. Effective learning takes place when courses are carefully designed and constructed: this is true for any form of teaching and learning transaction but perhaps critical in a situation where the navigator is cruising inside the mind of the teacher who has designed the course and who is not on hand to give instant clarification.

. Learners have a right to know what the course expectations are: where it is starting and what prior knowledge they need to have and how the course in question relates to others within the suite and their own previous life or learning experience.

. A formal avenue for teacher-learner contact: regular, focused and formal communication with a teacher is not only an enriching experience but also a highly motivating one; teachers encourage, challenge, clarify, expound and enable learning.

. A culture of active learning is crucial especially when the agenda includes an education for living. Questions, feedbacks, alternate views, writing, listening and sharing are all possible within today's technological realm. We have the capacity to make learning active or to make it into a "spectator sport".

. Opportunities for peer learning have to be created to enable learners to share ideas and respond to the ideas of others; windows for team and collaborative work should be part of a sensitive course design.

. Constant feedback: further learning is much more easily accomplished if one knows where one is coming from. Prompt and timely feedback to what one knows and does not know help in this process. Students also need to know how much their previous knowledge, skills and competencies can be applied to the new intellectual challenges.

. Setting tasks and deadline: clear indications of the amount of time to be spent on a task and specific deadlines for the accomplishment of tasks (to finish an assignment, design a project, complete a test, etc.) are helpful tools for carefully managed learning. The sensitivity of those who design the virtual lesson to these is an important asset.

. Creating pathways to learning: given the heterogeneous nature of the learners, it becomes important that opportunities be created for learners to explore alternate routes to achieving the same learning objectives. Individuals differ in the abilities and strengths they bring to a learning experience (some are good listeners, others learn better with visuals and yet others through case analysis); instructional design must cater for this individualism.

Good practise in education has always encouraged all of the above and more; the critical factors here are not about where and when students obtain their knowledge and skills but about how they can interact with their teachers, fellow learners and other sources of knowledge.

5. Conclusion

Success creates its own problems and poses new challenges. This must be true for technology as well as education. Our educational successes and technological innovations have led us to a situation where to be functional in the new millennium we not only have to be technologically literate but also, at the same time, be receptive to the new literacy throughout our lives. Herein lies the challenge and the opportunity - the challenge for nations and their educational institutions is to continue to provide opportunities for learning throughout life without a massive increase in costs and other resources and inconveniencing users; the opportunity is to utilise the very technologies that are part of the original problem to deliver those educational services at an acceptable cost, with convenient access and, most importantly, without losing the desirable traditions of the teaching and learning environment. Virtual classrooms and campuses are one part of a large array of strategies. To make the new (way of) learning meaningful to users, all of us have to do more work than we have done so far. The future is exciting.